

Part III

Application of concepts from Chapter 7

Expectations:

Select an extension problem or create one of your own (get approval from instructor before beginning)

Write a paper that describes/illustrates a real world application of a concept from Chapter 7. The paper must be typed.

Use at least one resource that ties to your extension project and cite it properly using APA. (see pgs 43-45 in handbook)

Part III will be graded and entered as the Assessment for Chapter 7

Each part will be graded on a 10 point scale

Points will be converted to a percent to align with grading for the semester

Exceeds expectations	9 or 10
Meets expectations	8
Meets expectations, but components missing	7
Unacceptable for grade	0

If Part III is submitted, but is unacceptable, it can be resubmitted

The resubmitted work will be graded with a max of 7 if acceptable

A new deadline will be determined by instructor

Late work: Deduct 1 pt for every 2 days the project is late

Extension ideas:	type of transformation(s)
Creating a Stencil Pattern: Design your own stencil pattern that could be used to create a border for a wall. How would you place the patterns to form a border for a 12-foot wall? What transformations would you use to create the pattern? Page 327	any transformation depending on stencil design
Kaleidoscope Symmetry: Draw a pattern that could be formed by a kaleidoscope whose mirrors meet at a 36 degree angle. Use colored pencils to show how the mirrors reflect the images. P333	reflections
Stars: page 330, Complete #43-48	rotations and reflections
Finding a Minimum Distance: Two houses are located on a rural road. You want to place a telephone pole on the road so that the length of the telephone cable is from both houses to the pole is the minimum length. Where should you locate the pole. Using computer program (example 332), pickup handout from Mrs. Fagan.	reflection
Billiards and Mini-Golf: Explain how reflections are used in billiards and mini golf (example p336, or handout from Mrs. Fagan)	reflection
Wagon Wheel Effect: Trace the wheel and rectangle shown on page 342 #33. Draw eleven other rectangles. In each successive rectangle, rotate the wagon wheel 50 degrees counterclockwise. Stack the rectangles in order. Hold the stack in one hand and use your other hand to flip through the stack. Do the wheels appear to be moving counterclockwise or clockwise?	
Using Transformations in Music: Create a musical measure and then translate and rotate the original to create "new songs". Play all measures. Use a library or some reference source to find examples of translations and rotations. Could a musical piece contain a reflection? Explain your reasoning.	translations and rotations
Clothing Patterns: Design or use a pattern and explain which pattern pieces are translated, reflected and/or rotated. See page 355 #17-20 as an example. Sew together your pattern and show the finished product.	transformations
Frieze Patterns: see 7.6 pages 358-362	transformations